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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Dale H. Buermann

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LUMEN INTELLECTUAL PROPERTY SERVICE INC
2345 YALE STREET
2ND FLOOR
PALO ALTO, CA 94306

EXAMINER

RATCLIFFE, LUKE D

ART UNIT

PAPER NUMBER

3662

DATE MAILED: 12/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/824,330	Applicant(s) BUERMANN ET AL.	
	Examiner Luke D. Ratcliffe	Art Unit 3662	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|-----------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-5, 15, 18-22, 29, and 32 rejected under 35 U.S.C. 102(b) as being clearly anticipated by Lapeyre (3400398).

Referring to claims **1, 18, 19, and 32**, Lapeyre shows a beam generation unit (figure 1 Ref 30), a radiation detection unit (figure 1 Ref 46), a rotation mechanism (figure 1 Ref 35), and a determination unit (figure 2).

Referring to claims **2 and 20**, Lapeyre shows at least one of the reference path and the first path further comprise a non-collinear folded path portion (figure 1).

Referring to claims **3 and 21**, Lapeyre shows a rotation mechanism that comprises at least one element selected from a group consisting of mirrors, refractive elements, diffractive elements and holographic elements (figure 1 Ref 32).

Referring to claims **4 and 22**, Lapeyre shows a reference path and a first path that are in a common plane (figure 1).

Referring to **claim 5**, Lapeyre shows a determination unit that comprises a detector for detecting the reference beam and the first beam (figure 1 Ref 46).

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Referring to **claims 15 and 29**, Lapeyre shows a angular velocity unit for measuring the angular velocity of the reference beam, the angular velocity unit being in communication with the determination unit (figure 2).

Claims 17 and 31 rejected under 35 U.S.C. 102(b) as being clearly anticipated by Keren-Gill (4911548).

Referring to claims 17 and 31, Keren-Gill shows a beam generation unit (column 3 lines 35-40), a rotation mechanism (figure 1a – 1c), and a determination unit (column 2-3).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 6, 12, 14, 16, and 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lapeyre (3400398).

Referring to **claim 6**, Lapeyre shows a beam generation unit (figure 1 Ref 30), the beam generation unit of Lapeyre is a single source with a beam splitter to split the signal into two different beams, it is obvious to replace the single source and beam splitter with two sources, this substitution adds no new or unexpected results.

Referring to **claim 12 and 25**, it would be obvious to include a second beam that travels along a second path that does the same as the first beam but

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is just a second measuring point because this is multiplying a part for a multiple effect as shown In re Harza, 274 F.2d 669, 671, 124 USPQ 378, 380 (CPA 1960).

Referring to **claim 14 and 28**, it would be obvious to have the second source in the same plane as the first source and in the same plane as the reference beam because this is what the reference shows.

Referring to **claims 16 and 30**, it would be obvious to use a micro-structure as a target because this is a common target and Lapeyre teaches a multitude of targets included, but not specifically, is a micro-structure.

Claims 7-11 13, 23, 24, and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lapeyre (3400398) in view of Korah (6115111).

Referring to **claim 7 and 13**, Lapeyre shows a beam generation unit (figure 1 Ref 30), a radiation detection unit (figure 1 Ref 46), a rotation mechanism (figure 1 Ref 35), and a determination unit (figure 2). However Lapeyre does not show a beam generation unit that comprises an active array of sources.

Korah shows an apparatus for determining distance that includes using an active array of sources (column 1 lines 10-45). It would have been obvious to use an active array of sources because multiple beams are needed in order to have the device work and an array can supply the multiple beams.

Referring to **claims 8, 23, and 26**, Lapeyre shows a beam generation unit (figure 1 Ref 30), a radiation detection unit (figure 1 Ref 46), a rotation mechanism (figure 1 Ref 35), and a determination unit (figure 2). However

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Lapeyre does not show a beam generation unit that comprises an active array of sources.

Korah shows an apparatus for determining distance that includes using an active array of sources that is able to endow the reference beam and the first beam with mutually distinguishing properties (column 1 lines 10-45). It would have been obvious to modify Lapeyre to include the mutually distinguishing properties taught by Korah because this allows the detector to distinguish the first beam from the reference beam and to recognize both of them from ambient light.

Referring to **claims 9, 24, and 27**, Korah shows a distinguishing property that is selected from the group consisting of polarization, wavelength, temporal beam format, and intensity (column 1 lines 10-45).

Referring to **claim 10**, Korah shows a distinguishing property being wavelength. It would be obvious with the combination of Lapeyre and Korah to include a wavelength filter in the detector because without the filter the transmission in wavelength would be useless.

Referring to **claim 11**, Lapeyre shows a determination unit that comprises a reference detector for detecting the reference beam and a first detector for detecting the first beam (figure 1 Ref 46 and 66).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Luke D. Ratcliffe whose telephone number is 571-272-3110. The examiner can normally be reached on 8:00-4:30 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Tarcza can be reached on 571-272-6979. The

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fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

LDR

LDR



THOMAS H. TARCZA
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600